WHAT IS CLAIMED IS:

1. A method of coating a polymeric substrate comprising the steps of:

forming a solution, said solution containing a negatively charged material and a positively charged material in an amount such that the molar charge ratio of said solution is from about 3:1 to about 100:1;

maintaining the pH of said solution within a range so that said negatively charged material and said positively charged material remain stable within said solution; and

applying said solution to said substrate to form a coating thereon, said coating on said substrate having at least two layers so that one of said layers comprises said negatively charged material and another of said layers comprises said positively charged material.

2. A method as defined in claim 1, wherein said molar charge ratio is about 10:1.

3. A method as defined in claim 1, wherein said negatively charged material comprises a polyanionic material.

4. A method as defined in claim 3, wherein said polyanionic material comprises a polyacrylic acid.

5. A method as defined in claim 1, wherein said negatively charged material comprises an additive.

6. A method as defined in claim 5, wherein said additive comprises an antimicrobial.

7. A method as defined in claim 5, wherein said additive comprises an antibacterial.

8. A method as defined in claim 1, wherein said positively charged material comprises a polycationic material.

9. A method as defined in claim 8, wherein said polycationic material comprises poly(ethyleneimine).

10. A method as defined in claim 8, wherein said polycationic material comprises poly(allylamine hydrochloride).

11. A method as defined in claim 10, wherein said negatively charged material comprises polyacrylic acid and wherein the pH of said solution containing said polyacrylic acid and said poly(allylamine hydrochloride) is maintained at a value of about 2.5.

12. A method as defined in claim 1, wherein said positively charged material comprises an additive.

13. A method as defined in claim 12, wherein said additive comprises an antibacterial.

14. A method as defined in claim 12, wherein said additive comprises an antimicrobial.

15. A method as defined in claim 1, wherein said solution comprises a polyanionic material and a polycationic material.

16. A method as defined in claim 15, wherein said polyanionic material predominates said solution.

17. A method as defined in claim 15, wherein said polycationic material predominates said solution.

18. A method as defined in claim 1, wherein the pH of said solution is maintained within about $\pm$ 0.5 of an appropriate pH range, said appropriate pH range being dependent on the selection of said negatively charged material and said positively charged material.

19. A method as defined in claim 14, wherein the pH of said solution is maintained within about ± 0.1 of said appropriate pH range.

20. A method as defined in claim 1, further comprising the step of preconditioning said substrate before dipping said substrate into said solution.

21. A method as defined in claim 20, wherein said substrate is preconditioned with a primer coating, said primer coating being applied to said substrate by dipping said substrate into a solution containing primer materials.

22. A method as defined in claim 20, wherein said substrate is preconditioned by the steps of:

providing a solvent solution comprising a solvent and at least one polyionic material;

allowing said substrate to swell in said solvent solution;

removing said substrate from said solvent solution after said substrate swells therein; and

allowing said substrate to shrink such that said at least one polyionic material becomes entrapped within said substrate.

23. A method as defined in claim 22, wherein said solvent comprises an alcohol.

24. A method as defined in claim 23, wherein said alcohol comprises isopropyl alcohol.

25. A method as defined in claim 1, wherein the thickness of said coating is from about 40 angstroms to about 2000 angstroms.

26. A method as defined in claim 1, wherein said substrate is dipped into said solution such that a coating forms thereon.

27. A method as defined in claim 26, wherein said substrate is coated with said solution in one dip.

28. A method as defined in claim 26, where said substrate is coated with said solution in 2 to 5 dips.

29. A method as defined in claim 1, wherein said substrate comprises a mold and further comprising the steps of:

dispensing a polymeric material into said mold;

curing said polymeric material so that said coating detaches from said mold during curing and at least partially attaches to the exterior surface of said polymeric material; and

removing said cured polymeric material from said mold, said polymeric material being coated with at least a portion of said solution.

30. A method as defined in claim 29, further comprising the step of preconditioning said mold with a primer coating.

31. A method as defined in claim 1, wherein said coating has at least two layers such that one of said layers consists essentially of said negatively charged material and another of said layers consists essentially of said positively charged material.

32. A method of coating a polymeric material comprising the steps of:

forming a polyionic solution, said polyionic solution containing a polyanionic material and a polycationic material in an amount such that the molar charge ratio of said solution is less than about 10:1;

maintaining the pH of said solution within a range so that said polyanionic and polycationic materials remain stable within said polyionic solution;

providing a substrate;

applying a solvent to said substrate, said solvent being capable of forming a stable solution when combined with said solution containing said polyanionic and said polycationic materials;

allowing said substrate to swell in said solvent;

removing said substrate from said solvent after swelling said substrate therein; and

dipping said substrate into said solution to form a coating thereon, said coated substrate having at least two layers with one of said layers comprising said polyanionic material and another of said layers comprising said polycationic material.

33. A method as defined in claim 32, wherein said polyanionic material predominates said solution.

34. A method as defined in claim 32, wherein said polycationic material predominates said solution.

35. A method as defined in claim 32, wherein the pH of said solution is maintained within about $\pm$ 0.5 of an appropriate pH range, said appropriate pH range being at least partially dependent on the selection of said polyanionic material and said polycationic material.

36. A method as defined in claim 35, wherein the pH of said solution is maintained within about $\pm$ 0.1 of said appropriate pH range.

37. A method as defined in claim 32, wherein said polyanionic material comprises poly(allylamine hydrochloride).

38. A method as defined in claim 32, wherein said polyanionic material comprises poly(ethyleneimine).

39. A method as defined in claim 32, wherein said polycationic material comprises a polyacrylic acid.

40. A method as defined in claim 32, wherein said solvent comprises an alcohol.

41. A method as defined in claim 32, wherein the thickness of said coating is from about 40 angstroms to about 2000 angstroms.

42. A method as defined in claim 32, wherein said substrate is coated with said solution in a single dip.

43. A method of coating a contact lens comprising the steps of:

forming a polyionic solution, said solution containing a polyanionic material and a polycationic material in an amount such that the molar charge ratio of said solution is less than about 10:1;

maintaining the pH of said solution within a range so that said polyanionic and polycationic materials remain stable within said solution; and

dipping said contact lens into said solution to form a hydrophilic coating thereon, said coated substrate having at least two layers such that one of said layers comprises said polyanionic material and another of said layers comprises said polycationic material.

44. A method as defined in claim 43, wherein said polyanionic material predominates said solution.

45. A method as defined in claim 43, wherein said polycationic material predominates said solution.

46. A method as defined in claim 43, wherein the pH of said solution is maintained within about $\pm$ 0.5 of an appropriate pH range, said appropriate pH range being dependent on the selection of said polyanionic material and said polycationic material.

47. A method as defined in claim 46, wherein the pH of said solution is maintained within about $\pm$ 0.1 of said appropriate pH range.

48. A method as defined in claim 43, wherein said polycationic material comprises poly(allylamine hydrochloride).

49. A method as defined in claim 43, wherein said polycationic material comprises poly(ethyleneimine).

50. A method as defined in claim 43, wherein said polyanionic material comprises a polyacrylic acid.

51. A method as defined in claim 43, further comprising the step of preconditioning said contact lens before dipping said contact lens into said solution.

52. A method as defined in claim 51, wherein said contact lens is preconditioned with a primer coating, said primer coating being applied to said contact lens by dipping said contact lens into a solution containing said primer coating.

53. A method as defined in claim 32, wherein said coating has at least two layers such that one of said layers consists essentially of said negatively charged material and another of said layers consists essentially of said positively charged material.

54. A method as defined in claim 51, wherein said contacts lens is preconditioned by the steps of:

providing a solvent solution comprising a solvent and at least one polyionic material;

allowing said contact lens to swell in said solvent solution;

removing said contact lens from said solvent solution after swelling said contact lens therein; and

allowing said contact lens to shrink such that said at least one polyionic material becomes entrapped within said contact lens.

55. A method as defined in claim 43, wherein said contact lens is coated with said solution in less than about five dips.

56. A method of coating a polymeric material comprising the steps of:

providing a substrate;

applying a first polyionic material to said substrate, said first polyionic material having a certain charge;

applying an additive to said substrate, said additive having substantially no charge;

applying a second polyionic material to said substrate after applying said additive thereto, said second polyionic material having a charge opposite to said charge of said first polyionic material;

applying a solution to said substrate to form a coating thereon, said solution containing a polyanionic material and a polycationic material in an amount such that the molar charge ratio of said solution is from about 3:1 to about 100:1, wherein the pH of said solution is maintained within a range so that said polyanionic material and said polycationic material remain stable within said solution; and

said coated substrate having at least two layers such that one of said layers comprises said polyanionic material and another of said layers comprises said polycationic material, said two layers substantially entrapping said additive on said coated substrate.